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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,015	10/21/2003	Jean Marc Berthaud	FR920020058US1	4790
46583	7590	12/29/2008		
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191				
EXAMINER RUSSELL, WANDA Z				
ART UNIT		PAPER NUMBER		
2416				
NOTIFICATION DATE		DELIVERY MODE		
12/29/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com  
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### Office Action Summary

**Application No.**

10/690,015

**Applicant(s)**

BERTHAUD ET AL.

**Examiner**

WANDA Z. RUSSELL

**Art Unit**

2416

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2, 4 and 7-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4 and 7-22 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 10-11, and 20-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter on the basis of nonfunctional descriptive material.

Claim 10 recites, "A computer program product...". "A computer program product" is only disclosed in para. [0114] of the specification (see publication), but no explanation of it. Thus, it is merely computer instructions per se. Thus, it is merely an abstract of idea, and thus non-statutory.

Thus claim is just a computer program code that processing the steps. This subject matter is not limited to that which falls within a statutory category of invention because it is not limited to a process, machine, manufacture, or a composition of matter. It does not fall within a statutory category since it is clearly not a series of steps or acts to constitute a process, not a mechanical device or combination of mechanical devices to constitute a machine, not a tangible physical article or object which is some form of matter to be a product and constitute a manufacture, and not a composition of two or more substances to constitute a composition of matter.

Claims 11 and 20-22 depend on claim 10, and have the same problem.

The examiner suggests a preamble as follows:

"A computer readable medium encoded with computer executable code to perform a method, the method comprising:"

Appropriate correction of both claims and specification is required.

***Claim Rejections - 35 USC § 102***

Art Unit: 2416

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1-2, 4, 7-13, and 17** are rejected under 35 U.S.C. 102(e) as being

anticipated by Garcia-Luna-Aceves et al. (Pub No. US 7027449 B2).

For **claim 1**, Garcia-Luna-Aceves et al. teach a method for routing a datagram (see Fig. 2) in an IP network (IP, refer to col. 16, line 59), said method comprising the steps of:

receiving a datagram with a destination network address (dest in 14 of Fig. 2, and flows from 16, 18 to 12 and 20 in Fig. 2);

identifying a next hop router path en route to or associated with said destination network address (flows based on ... destination, refer to col. 4, lines 19-20); and

determining whether or not transmission of said datagram on a link to said next hop router would result in a bandwidth usage exceeding a bandwidth threshold (When a flow request of bandwidth  $p$  is made by an application at the source router  $i$  for destination  $j$ , the source router selects a valid path using the local link database along any shortest path from  $i$  to  $j$  that satisfies the bandwidth requirement, see col. 15, lines 56-60) associated with said next hop router (see Fig. 7; and When a router  $i$  receives a packet for router  $j$  it determines the next-hop  $k$  for this packet using a distributor to

allocate packets to next-hops in proportion to their bandwidths, see col. 15, lines 36-37),  
and

if not, updating the bandwidth usage associated with said next hop router (If the signaling is successful, for each link  $(i,k)$  on the path,  $B_{sub.j,k.sup.i}$  and  $B_{sub.j.sup.i}$  are incremented with  $p$ , see col. 15, lines 61-63), and transmitting said datagram to said next hop router (see Fig. 7; and When a router  $i$  receives a packet for router  $j$  it determines the next-hop  $k$  for this packet using a distributor to allocate packets to next-hops in proportion to their bandwidths, see col. 15, lines 36-37),

if so, selecting among other possible next hop routers en route to or associated with said destination address, another next hop router for which transmission of said datagram on a link to said other next hop router would not result in a bandwidth usage exceeding a bandwidth threshold associated with said other next hop router, updating the bandwidth usage associated with said other next hop router (It then initiates hop-by-hop signaling to reserve resources along the selected path, see col. 15, lines 60-61), and transmitting said datagram to said other next hop router (see Fig. 7; and When a router  $i$  receives a packet for router  $j$  it determines the next-hop  $k$  for this packet using a distributor to allocate packets to next-hops in proportion to their bandwidths, see col. 15, lines 36-37); and

basing a routing decision on the bandwidth usage of the link to said next hop router, wherein the bandwidth usage is a dynamic parameter which is updated in a forwarding information database (FIB) in real-time (routing table, see col. 15, lines 34-37).

For **claim 2**, Garcia-Luna-Aceves et al. teach the method as set forth in claim 1, wherein the step of selecting comprises the steps of:

if, among said other possible next hop routers, there is no other next hop router for which the transmission of the datagram on the respective link would result in the bandwidth usage being less than the respective bandwidth threshold, choosing among said other possible next hop routers, another next hop router, updating the bandwidth threshold associated with said other, chosen next hop router with a larger, predefined bandwidth threshold (It then initiates hop-by-hop signaling to reserve resources along the selected path, see col. 15, lines 60-61), and

transmitting the datagram to said other, chosen next hop router (see Fig. 7; and When a router i receives a packet for router j it determines the next-hop k for this packet using a distributor to allocate packets to next-hops in proportion to their bandwidths, see col. 15, lines 36-37).

For **claim 4**, Garcia-Luna-Aceves et al. teach the method as set forth in claim 1 wherein the step of updating the bandwidth usage associated with the first said next hop router, comprises the step of updating in a table, the current bandwidth usage with the estimated bandwidth usage (routing table, see col. 15, lines 34-37).

For **claim 7**, Garcia-Luna-Aceves et al. teach the method as set forth in claim 2, wherein the step of choosing among said other possible next hop routers, comprises the step of choosing among said other possible next hop routers, a next hop router according to a shortest path algorithm (shortest path, refer to col. 8, line 43, and It then

initiates hop-by-hop signaling to reserve resources along the selected path, see col. 15, lines 60-61).

For **claim 8**, Garcia-Luna-Aceves et al. teach the method as set forth in claim 1, wherein a bandwidth usage of a link to said next hop router is based on other datagrams that have been transmitted on said link within a time period prior to a current time (see Fig. 6 for neighbors).

For **claim 9 and 12**, they are means claims (router in Fig. 2) corresponding to method claim 1 and 2, therefore they are rejected for the same reason above.

For **claim 10 and 11**, they are computer program product (see Figs. 3, 8, and 10) claims corresponding to method claim 1 and 2, therefore they are rejected for the same reason above.

For **claim 13**, Garcia-Luna-Aceves et al. teach the method as set forth in claim 1, further comprising sending an IP datagram with an updated header to a selected next hop router (IP header, refer to col. 16, lines 56-59) and defining a current bandwidth for billing as an increasing function (bandwidth usage which is reflected in a higher call-acceptance rate, refer to col. 18, lines 1-3).

For **claim 17**, it is corresponding to claim 13, therefore it is rejected for the same reason above.

#### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the



invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 14, 16, 19, 20, and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Garcia-Luna-Aceves et al. (Pub No. US 7027449 B2), in view of Klinker et al (U.S. Patent 7,133,365 B2).

For **claim 14**, Garcia-Luna-Aceves et al. teach everything claimed as applied above. However, that fail to specifically teach the method as set forth in claim 1, further comprising, at a beginning of a billing period, defining a current bandwidth threshold equal to a lowest value in a list of bandwidth thresholds.

Klinker et al. teach the method as set forth in claim 1, further comprising, at a beginning of a billing period, defining a current bandwidth threshold equal to a lowest value in a list of bandwidth thresholds (billing period ... minimum bandwidth commitment ... a utilization ... threshold, refer to col. 20, lines 27-32).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Garcia-Luna-Aceves et al. with Klinker et al. to obtain the invention as specified, for providing usage and billing information.

For **claim 16**, Garcia-Luna-Aceves et al. teach everything claimed as applied above. However, they fail to specifically teach the method as set forth in claim 1, further comprising, for each link to a next hop router, utilizing a current bandwidth for billing, a list of bandwidth thresholds, a current bandwidth threshold, and a billing period to route traffic.

Klinker et al. teach the method as set forth in claim 1, further comprising, for each link to a next hop router (NSP 1 to NSP n in Fig. 2), utilizing a current bandwidth for

billing (next-hop ... billing ... circuit bandwidth for calculating the utilization, refer to col. 20, lines 26-29), a list of bandwidth thresholds (several absolute thresholds, refer to col. 24, line 13), a current bandwidth threshold (utilization alarm threshold, refer to col. 20, line 31), and a billing period to route traffic (billing period, refer to col. 20, line 27).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Garcia-Luna-Aceves et al. with Klinker et al. to obtain the invention as specified, for providing usage and billing information.

For **claim 19**, it is corresponding to claim 16, therefore it is rejected for the same reason above.

For **claims 20 and 22**, they are corresponding to claims 14, and 16 respectively, therefore they are rejected for the same reason above.

7. **Claims 15, 18, and 21** is rejected under 35 U.S.C. 103(a) as being unpatentable over Garcia-Luna-Aceves et al. (Pub No. US 7027449 B2), in view of Klinker et al (U.S. Patent 7,133,365 B2), and Chwastyk (U.S. Patent 3,783,258).

For **claim 15**, Garcia -Luna-Aceves et al. teach everything claimed as applied above. In addition, Garcia-Luna-Aceves et al. teach to emit a next, a list of bandwidth thresholds (selects a valid path using the local link database along any shortest path from i to j that satisfies the bandwidth requirement, see col. 15, lines 56-60), a current bandwidth threshold (bandwidth p, refer to col. 15, line 56).

However, they fail to specifically teach a billing period in the FIB.

Klinker et al teach a billing period in the FIB (billing period, refer to col. 20, line 27 & lines 21-32).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Garcia-Luna-Aceves et al. with Klinker et al. to obtain the invention as specified, for providing usage and billing information.

Further, Garcia-Luna-Aceves et al. in view of Klinker et al fail to teach adding a minimum time to emit.

Chwastyk teaches adding a minimum time to emit a next datagram (minimum time between data sets ..., refer to col. 5, line 15).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Garcia-Luna-Aceves et al. with Klinker et al., and Chwastyk to obtain the invention as specified, for providing minimum time between data sets.

For **claims 18 and 21**, they are corresponding to claims 15, therefore they are rejected for the same reason above.

#### ***Allowable Subject Matter***

8. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

9. Applicant's arguments, filed 7/21/2008 have been fully considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WANDA Z. RUSSELL whose telephone number is (571)270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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